Diversified ways of approaching distinct instrumentation and arrangements for The Witcher 3 and their predominant influence in the Video Game.

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Introduction

I have been a fan of The Witcher Series ever since the first game released in 2008. At the time, the concept of a Role-Playing video game was very new to me and I had no idea what to expect from it, but it peaked my curiosity.

Ever since then, The Witcher has had one of the most Iconic stories that I've ever come across in a video game. The art of storytelling took a new role in The Witcher, in a sense that you, as the player can reshape the entire plot depending on how you play, and on the various decisions you make as the story goes on.

The gaming franchise consists of a trilogy, whereby one would be able to witness the growth in character and plot over the years of each release. The music in The Witcher behaves in similar way as well, and is one of the most crucial aspects in the storytelling. From the very first game up until the third and most recent, we hear a constant growth in the score in terms of themes, arrangements and instrumentation while still maintaining its identity. Each game has had its own unique sound that is still part of The Witcher Universe, hence this is what has drawn me to this topic.

This research paper aims to provide an in-depth analysis on how diverse instrumentation and various arrangements are combined together to create a fully immersive environment within The Witcher 3 in a way that proves unique to the game. A range of topics will be covered in order to support the argument, which would consist detailed analysis on how music interacts with different regions of the game, brief comparison to its predecessors, the initial ideas of choosing instrumentation and how the process began of composition and implementation.

Brief History of The Witcher

The Witcher 3 is a fantasy RPG video game that has been released in 2015. As the title suggests, this is the third series in The Witcher franchise. The first game has been released to the public in October 2007 and since then the bar of RPG gaming has been established worldwide.

The Witcher started off as a well known series of novels authored by a Polish writer, Andrzej Sapkowski. The Witcher Saga consists of five novels ranging from the years 1994 to 1999 and the first book was released in 1994 and has already been well established in Poland. The stories were also adapted into six short graphic novels during the same time period, and due to rising popularity the novels made their way into the Film and Television business. The Film, titled The Hexer was released in 2001 and although being an adaptation of the popular novels, the film was criticised as a complete failure and didn't manage to break even in terms of success and profit. (gamemusic.pl, 2016)

Shortly after, The Witcher Video Game was introduced by CD Projekt Red, and has been a direct adaptation of the critical events that take place in the novels. The Witcher 1 was released in October 2007 and has been a unique approach for a video game - to have role playing gameplay, consequence based decisions, romance options and multiple side quests apart from the main story. The game grew in popularity amongst gamers around the globe and thus paved the way for the video game franchise.

 Since then, The Witcher has gained worldwide recognition amongst gamers along with novel enthusiasts and still stands as one of the best Video Game franchises till today.

Plot Synopsis

All the games are based upon the main protagonist Geralt of Rivia who is known as the witcher in the title. In simple terms, a Witcher is someone who has undergone intensive combat training, mental and physical conditions and chemical mutations, in order to create a superhuman to balance a world full of monsters, humans and other various creatures. In the events of Witcher 1, Geralt wakes up with having no memory of his previous life and the events that took place prior the game. After wandering in a forest he eventually comes across some other witchers and sorceresses at Kaer Morhen - The home and training ground of the witchers. He is quite familiar with all of the characters here, however still lacks certain memories. Eventually these characters go on a quest to obtain Geralt's lost memories throughout the games.

The Witcher 2: Assassins of Kings

In The Witcher 2, The king has been assassinated by another witcher from another clan while framing Geralt for the murder. Geralt pursues the assassin throughout the game and is able to recover a slight portion of his memories.

The Witcher 3: The Wild Hunt

At the start of the third game, Geralt has recovered all of his memories and now embarks on a quest to find his lost non-biological daughter Ciri, who is on the run from The Wild Hunt, who in turn want to kill her for her extraordinary power. The Wild Hunt, according to the game is a mystical order from another world who's main goal is to end all humanity. There are other various side - quests that also have to explored in order to progress further in the main storyline, most of these can include political aspects, war control and traveling to various places within the game.

The Witcher 1

The score for the first game was composed by Adam Skorupa and Pawel Blaszczak. As this is the first game in the franchise, its important to establish main themes for the characters that are important to the plot and the setting of each game. In other words, setting the overall tone and character of the music for the entire saga. In general analysis, the score can be characterised as a large orchestral piece fused with some slavic elements in a way that one is not dominant than the other, but more of a neutral blend between the two musical varieties.

The Witcher is an exploration based game, hence I believe that an atmospheric score is vital for games such as these. The main themes are also exposed in the exploration sequences which is an interesting approach of letting the player be aware of the motif that could relate to a character or plot in that particular place or situation. In context, the orchestra normally takes on the role of supporting the harmony while other solo instruments such as Irish whistle, Irish flute, bagpipes and lutes take the lead role.

The Witcher 2: Assassin's of Kings

The score for the Witcher 2 sounds much more aggressive and monumental than its precursor. However while retaining a few similarities, there are certain aspects that make the score stand out from the gameplay which almost give it a more 'cinematic' feel. For instance, the score here has been expanded on in a way that it extends out of the games realm of mythological fantasy, with the use of big action drums and even electric guitars accompanied with a string and brass section, and various ethnic instruments - giving it a modernised fantasy sound. (gamemusic.pl, 2016)

The Witcher 3: The Wild Hunt

The score for the third game of the franchise had a whole unique composing pallet as compared to the previous games, as if the music has been remodelled with an entire new form of timbre and structure. Composers Marcin Przybyłowicz and Mikolaj Stroinski collaborated together on the score and seemed to have taken the music to a far and unique extent that is unpredictable in comparison to the original music within the games prior.

The first time i've heard a glimpse of the score was in The Witcher 3 Cinematic Trailer, called the 'The Trail'. At first I found myself slightly distracted with the music, as what I've heard was completely unexpected. The very first thing we hear in the cue is a vocal phrase sung in an ethnic structure accompanied with heavy percussion, which then leads into a melodic statement slightly 'hinting' The Witcher theme on a lute, followed by strummed rhythmic patterns. The main focus of the cue here is the vocals as they are the most prominent throughout the entire cue. The entire melody is vocalised and performed in sort of an uproarious manner which adds a whole new raw and organic kind of sound.

The trailer sets the colour of the music for the entire game, as some do in most cases. However, in this particular case, there has been a dramatic shift in instrumentation, arrangement and style while still retaining the heroic sound induced by an orchestra. In brief comparison, the music here loses that majestic and monarchical sound that most players would already be accustomed to hearing especially in the The Witcher 2, and is turned into a dark fantasy grounded in Slavic folklore while engaging the music in a new direction of maturity. This is the first time that the audience would capture an aural sense of the score which automatically changes the perceived outline of story as it did with the music.

Composer's Biography

The Witcher 3 would not be the game it is today without Composers Marcin Przybyłowicz and Mikolaj Stroinski. The music plays an incredibly vital role towards the games plot, atmosphere and realm with its cohesive structure in melody and instrumentation. Personally, never have I been truly immersed in a video game until now. Marcin Przybyłowicz is a Polish composer who began his career while studying at F. Nowowiejski Academy of Music in Poland. Initially his work involving The Witcher, began upon the release of the first game in which he was invited to compose for the 'Inspired by The Witcher' album. Since then, his work has been noticed and has also composed additional music for The Witcher 2. As of present, Marcin is the Music Director of CD Projekt Red and took the role of lead composer for the third game.

While already being well known in the Television and Video Game Industry, Mikolaj Stroinski was also invited to score the game alongside Przybyłowicz. Stroinksi is a graduate from Karol Szymanowski Music Academy and Berklee College of Music with an outstanding achievement in Film Scoring. He has scored music for multiple TV programs and has expanded into the Video game industry once he scored the trailer for the wildly successful video game - Dark Souls 2. Both Przybyłowicz and Stroinski are the primary composers for The Witcher 3. (Stroinski, 2015)

Music Research Analysis

The Witcher 3 has quite a few similarities in terms of location and environment as the first game. The landscapes were harsh and filled with monsters, lands were are between war but nonetheless it also has its beauty in architecture and scenery within certain regions of the game. Something similar can be said about the music in this aspect, whereby at certain times the music can sound extremely brutish and aggressive with profound rhythms. However, in other regions, the music can evolve into a lush and ambitious form with profound orchestrations.

The overall tone of the music may change from time to time depending on location and player decisions, but one thing is for certain - there is an important aspect in the music that is always kept consistent throughout the entire score and also acts as a balance from cue to cue, instrumentation.

During early stages of production, Przybyłowicz and Stroinski resolved on taking The Witcher back to its Slavic roots by inviting Percival to collaborate on the score. Percival is a Polish Folk band whose music represents the history of Slavic traditions, early Medieval times and the Viking Era by process of reenactment. Their contribution to the score of The Witcher proved to be a valuable asset in the production by implementing a wide range of historical instrumentation, their performance on these instruments and providing incredibly unique vocal parts for the score. Some of their main instruments used include the Baglama, Custom Hurdy-Gurdy, Bowed Gusli and Kemencé. (Percival, 2015) (Przybylowicz, Slavic Adaptation of Music, 2016)

This is what gives the music its peculiar, yet exotic notability in the video game fantasy realm as it can be justified as a sound that most may not be familiar with. This would often be referred to as 'ethnic music' by other nations across the Globe.

The composing process had another peculiar approach as compared to how one would normally expect. Through interview, it is said that Percival has had quite a bit of freedom when it came to the recording, and while improvisation being one of their strongest attributes, was also recommended for the score. The players were tasked to record several phrases and musical intonations on various yet specific instruments such as the lute, Baglama, Davul and Bhodarn, a variety of different wind instruments and vocals especially. (Percival, 2015)

This effectual process granted the composers to form their own folk musical pallet which also in a way, gave them boundless freedom when it came to arranging and transforming them into a final piece of music. Through this process, a foundation and core of the music has already been established with its slavic roots.

In addition, the performance from Percival contribute astonishingly well with the interactivity and level design of the game, providing its raw organic nature and use of different textures and nuances in a free, yet precise manner of how the instrument would be played in the medieval era.

The orchestral parts were later prepared and layered after having recorded Percival, as the composers thought it would be best to mostly focus on having solo performances as the core of each cue, instead of starting out with an orchestral pallet this time. (Przybylowicz, Slavic Adaptation of Music, 2016)

Roughly six hours worth of material has been recorded for the game, out of which most of them are in the key of D. There are two main reasons for as to why majority of the cues were written in one key signature. Firstly, most of the instruments were naturally tuned to D natural and as Przybyłowicz stated, the idea was to maintain the integrity of the instruments and performances

identically to how they were played initially, sticking to their original timbres and quality of the instruments with regard to Slavic folklore. The second reason of maintaining the same key signature has to do with the implementation of the music into the game for easier and more convenient interactivity. (Przybylowicz, Slavic Adaptation of Music, 2016)

The score also has another unique feature to it that may not seem all that common, especially in a fantasy video game. Przybyłowicz and Stroinski had come up with an idea to use actual pre-recorded songs and lyrics to score certain moments in the game. Their initial goal was to make the music have its very own form of expression in a way that would make it stand out more to the audience and to have its own voice in the story telling. Some lyrics were taken from old folklore songs from various different regions and were recreated with Percival with newer arrangements and song structures, these are then specifically arranged to certain zones in the game in prospect of adding a layer of depth in immersion.

Zones

In the game, there are three main regions where the music behaves quite differently from one another, largely dependent on the physical environment itself, the history of the land and the main plot that takes place within that region.

Each zone in The Witcher has a completely unique atmosphere and ambience, For instance, the Province of Velen, which is also referred to as No Man's Land, is a country that has faced the aftermath of war and death, and is now ravaged with poverty and depression. Then there is the beautiful city of Novigrad, - an area with more of a renaissance feel built with modernised architecture and filled with a lively community of characters.

The music gradually develops as the player progresses through each zone in conjunction with the story, with builds in instrumentation, arrangements, melodic structure and harmony.

The first zone of plot and gameplay begin at Velen. As mentioned before, Velen is a land that lies in devastation and despair and is portrayed as the lowest country in the game in terms of living standards, diseases and infestation. One of the main cues used in this area is 'The Hunters Path' and has probably been heard the most during gameplay at Velen since a lot of exploration needs to be done in the game in order to progress and upgrade your character, and The Hunters Path cue serves as an exploration sequence based around the Velen area.

Now, what makes this cue so prominent and what its purpose as an exploration sequence? There is not a lot of instrumentation arranged in the cue per say, however it still has quite a full and adequate sound to it. The piece is kept moderately slow with a tempo roughly around 88 beats per minute in the key of D minor and consists of traditional string instruments, percussion and low orchestral strings in the background.

The main focal point of the cue is its legato phrasing on a kemencé as a solo instrument. Each phrase is played very expressively on a lower register throughout the entire cue, however tends to fade in and out of the mix from time to time. The colour and texture of the kemencé has a very distinctive sound to it and provides a befitting ambience to the land of Velen with a crisp and gritty kind of sound and is quite noticeable on the loud bowing's nearing the end of each note. It is also played with a reasonable amount of vibrato adding more expressiveness to the phrase, as its the only instrument playing the melody.

This particular sound adds more dimension to the landscape of Velen due to its obscure and tainted tone, complimenting not only the visuals, but also the personality of the characters and the land in a seamless manner.

The Hunters Path consists of a lot of various percussion throughout the entire track, although while being a cue based on exploration, the percussion doesn't have an intense and forceful rhythm to it as you would expect in a danger or combat situation but more of a steady motion yet, an uncommon rhythm. The percussion used are well balanced in terms timbre ranging from low sub hits, hand drum rhythms to shakers, woodblocks and cymbals. A Baglama is also added to the downbeats of the drum, however only playing in a staccato technique allowing more room for kemencé to take over.

The cue has a lot of breath with its motion in percussion, phrasing on the kemencé and its dynamic structure, it almost gives the sense of a tempo-less progression or 'loose' movement to the piece overall. Due to this I can add in my perspective that this reflects the personality and interpretation of the non playable characters or 'NPC's' that you would find in Velen as obscure, harsh and

heedless, justified that these characters are underprivileged with regard to not having an education, being brought up as a peasant and living a life filled with despair and misfortune.

The Hunter's Path, Melody.

With that being said, The Witcher would not be the award winning title it is today without its combat mechanism. In a a role playing game, a combat sequence can start at random times from exploring, or even right after a dialogue cutscene, hence consistency in the music is vital especially in this sort of situation.

One of the most common cue's I have come across in the game while entering combat around Velen is 'Silver for Monsters..' the cue bears a remarkable similarity with that of the exploration sequence. However, this is driven a bit further with extensive and heavier low percussion, fierce strumming on the Baglama, Hurdy Gurdy, kemencé and the main highlight of the cue, the vocals.

Silver for Monsters consists of exactly the same instrumentation of the exploration cue, the only major difference is the vocal. The tempo for the piece is roughly the same as in The Hunters Path, but is 88 beats per minute too slow for a combat cue? not necessarily in this case. The idea of

having the same tempo for each cue is that the exploring sequence can transition well into the combat without having an abrupt change that would be noticeable by the player for instance. Generally in the game, cymbal risers and drum rolls are used as a small transition cue to segue the music into one another, most commonly acting as a bridge when going from exploring to combat mode. However a small outro or coda segment is used when transitioning from the combat back to the exploration, such as when finishing a battle, the coda would come in most likely synced on the closest beat or through a fade in while the combat cue fades out, thereafter the exploration sequence will begin upon the end of the coda.

As soon as the combat begins, the first thing we hear is a forceful strumming rhythm being played on the Baglama and is heard in majority of the cue. Accompanied along, is also a low drone-ish kind of sound performed on the kemencé - adding the gritty and harsh effect with a little dissonance, also complementing the heavy drums playing in the sequence. The vocals were something of the unusual side, especially while hearing it the first time as its not the kind of vocal sound most people would expect in an 'epic' scenario. All vocals on the score are performed and sung by Percival as well, and mostly comprised by two or three female voices. In addition to this, Percival were already well established in the art of reenacting ancient Slavic and Medieval music with regard to vocal performances as well.

There are no particular lyrics sung in the cue, moreover of vocalisations and chants performed as a melody which is sung over all of the other instruments. The human voice is the only instrument that is most distinguishable and where our attention is drawn to the most as a natural instinct, thus arriving at the point where the vocals are the most prominent and important aspect in the cue. The melody is performed in what one may say, a ruthless and insensitive manner, which I believe

compliments the gameplay in Velen exceptionally well and also draws the player into the actual immersive-ness that the music is trying to achieve.

Silver for Monsters, Melody.

Having a vocal driven combat cue is a unique and interesting approach that even some may argue with, however in the case of The Witcher, Vocals are an unimaginable critical part of the music in a sense that it's never been used in this fashion, in both of the previous installments, or in any other game for that matter. As previously stated, the human voice is an instrument that can immediately capture someones attention, the vocalisations act as a way to grasp the player into a virtual space aurally describing the barbaric lands of Velen.

Zone 2 - Novigrad and Oxenfurt

As the player progresses through the story, they would eventually come across the city of Novigrad and Oxenfurt, these are the next two locations following after Velen. Novigrad and Oxenfurt are both similar in terms of new landscapes and characters, however they largely differ from that of Velen - these new cities are a lot more sophisticated and advanced in terms of building architecture, larger communities and civil cultures.

Exploration Cue 1 - Outskirts of Novigrad

Upon entering the city of Novigrad, one may not immediately notice a change in the music when travelling from Velen. The very first thing they would notice is a huge change in the terrain and characters - evolving from a forlorn and tragic area to a larger city with infrastructure filled with lively characters. Of course, in order to keep the music consistent in transitioning to and fro these regions, tonality, tempo and instrumentation remain remarkably similar to each other, yet when payed proper attention to; the player may become aware of an elevation in the score.

The music differs here from Velen in numerous ways. for instance, the music in Novigrad and Oxenfurt are far less folk-driven and develops more into a Renaissance music custom which would seem appropriate in correlation with a change in visuals. A few examples would be the extended use of plucked stringed instruments, change in vocal styles and the orchestra having an even greater role in this region.

Outskirts of Novigrad is an exploration - based cue that comes in to play when roaming around the city, the cue has a few different variations with regard to layering, depending on where you explore the area and how the player interacts with certain gameplay moments.

In the very beginning of the piece, we hear the following melody opened up on strings:

Once again, the entire key is in D minor, which keeps the music consistent when travelling from different zones. This melody sets the foundation of the cue, further to be taken towards the lute accompanied with woodwinds. The lute carries on the melody underlining the following theme played on a flute.

This is the first time a variation of the witcher theme is actively present in a cue played by a solo instrument. The original theme has firstly been introduced in The Witcher 1 and was formerly presented as the main leitmotif for Geralt of Rivia. While the melody was initially presented in the key of F minor in the previous games, the theme has been transposed to D to present itself in a way to match the rest of the music in the score. This also allows the composers to bring in the theme almost at any point within the score, however it is used very selectively.

Original Witcher Theme:

In The Witcher 3, there is a greater use of leitmotifs as compared to its formers, however they can be heard most of the time during the previous games in contradiction to The Wild Hunt. Przybyłowicz and Stroinski have come up with a way of using all the themes in each piece of music, without it being overused through the implementation. Themes come in layers or separate stems so they can be triggered at any point to play over the selected cue.

At specific moments during the exploration, only a few stems would be playing without their solo instruments, such in this case where the strings, lute and light percussion would play all together without the flute and vocals - with only chordal passages in the strings and the initial melody plucked on the lute.

This developed technique can also give the player a sense of the leitmotif as it would come and go at random moments of gameplay, without it being overwhelming to the ears. Vocals and percussion also act as a third layer and is often played over the main theme on the flute, adding harmony to the melody, once more using vocalisations instead of lyrical words. This brings the music into a more delicate construct by changing the performance from a harsh texture as in Velen, to more of a soothing legato phrase to emphasise the different emotions portrayed in each zone.

When the player nears closer to Oxenfurt and further from Novigrad, usually a transition takes event between cue's, fading out 'Ouskirts of Novigrad and introduces 'Whispers of Oxenfurt'. At often times, the transition could barely be noticed since there isn't any change in tempo, meter and key signature once more. An important factor I have noticed, there is a wide use of plucked and tonal percussive instruments within these two regions to either provide harmonic support or to be on counterpoint, yet they are all played with a certain elegance to them regarding dynamic instruments.

With that being said, the music of Velen is of a total opposite nature, where everything appears to be forced and lacks a certain class.

Both, Outskirts of Novigrad and Whispers of Oxenfurt can be classified as very similar cue's due to their character and structure. Whispers of Oxenfurt begins with a rhythmic pattern performed on a dulcimer and is present throughout the entire cue, this would take role of the lute when there is a

transition from the previous cue. Accompanied along with it is a solo violin playing the following melody.

Beginning the motif with just a sequence of three notes with slight melodic development, then returning back to the three note structure would strike a pattern in the listeners mind, almost making him/her get used to it due its simplistic nature and therefore portraying that as the lead melody. In addition, the piece is performed on a solo violin with espressivo further leading up to the conclusion of perceiving that as the lead motif in the cue. Within the first layer of the piece, this idea may be true since it only consists of the violin, dulcimer and tonal percussion.

Although, another variation of the piece would come in to play upon entering the main city or interacting in a different location. It is from that moment on, the line on the violin becomes the counter-melody of the piece, with vocals taking over. In the new variation, lyrics have been used to bring forth the idea of scoring with songs once more. The concept of having song lyrics combined with written score contributes well enough to the exploration scene while taking the music to a new hight in perspective. Below is a short transcription of the vocal parts accompanied by the violin:

Notice how exactly the same melody portrayed on the violin earlier is now written in between the vocal parts, changing its perspective from the lead motif into a counterpoint, and a new melody layered on top of it.

Similar to some of the combat sequences, the vocals fade in at very specific moments during the game, for example when the player is roaming around in the city, unlikely to trigger any cutscenes or raise up any dialogue options while interacting with other characters. This is an interesting approach to keep the exploration captivating - by bringing the vocals to its foreground to be heard and removing them once the character triggers another sequence they vocals may be in conflict with.

The lyrics used in the piece were taken from an old Northumbrian lullaby called 'Bonnie at Morn' which was written in the nineteenth century. Below is a brief extract of the lyrics:

>We're a laid idle wi' the keeping o' the bairn
>
>The lad widnae work and the lass widnae learn
>
>We're a laid idle wi' the keeping o' the bairn
>
>The lad widnae work and the lass widnae learn
>
>Thou's o'er lang in thy bed
>
>Bonnie at morn

The time the original piece was written, Northumbria was the only part in England that had its own musical dialect, with its own set of harmonies and melodies that were distinct from the rest of the world. Bonny at Morn was considered a masterpiece and was initially just an instrumental before any words were added to it.

The lyrics form a lullaby normally addressed to an infant or a baby which represents the life of a family. While the lyrics serve no particular purpose in the game, its use has an intriguing way of putting the player in the world of Oxenfurt, justified its environmental architecture which represents the old land of Northumbria or linking back to the Renaissance factor once again. Furthermore, Bonnie at Morn is also well recognised piece and can easily be acknowledged by certain players. (gamemusic.pl, 2016)

The vocals used in Novigrad and Oxenfurt push the music to its foreground in order to be heard and more importantly, to influence the idealisation of modernity within these locations in attention to the artistic and civilised environments. (Cook, 2016)

Commanding the Fury is another action based cue which plays around certain spots in Novigrad and Oxenfurt too. However, this piece is a generic combat cue, meaning it is not tailored to any particular scene or combat with a particular antagonist or character. Commanding the Fury can be heard in all locations - Velen, Novigrad and Skellige therefore the music and instrumentation has to be consistent with the other generic cue's to their corresponding region.

The track consists of all the instruments that were mentioned so far such as low strings, intense percussion, kemence, woodwinds, Baglama and the addition of Hurdy Gurdy and Gusli. These two instruments take a predominant role in this piece and can be considered as a foundation the rest of the cue is built upon. The cue is written at around 160 beats per minute and incorporates a simple Celtic ornament beneath a layer of heavy percussion and low strings striking each downbeat. However, the Celtic tune does not in fact serve as melody but provides a ticking motion underneath which drives the rest of the cue.

Percival are well known for their alteration of instruments and diverse playing techniques. The sound of the Ostinato is created by bowing the Gusli which is originally a plucked instrument, accompanied with the Hurdy Gurdy playing in unison. As a result, there is a lot of clash with regard to tuning. The deliberate decision making in this technique not only provides a distinctive sound to the piece, but also gives the impression of a barbarous and primitive structure to the Ostinato to reflect on the combat.

Zone 3 - The Isle's of Skellige

Beyond Novigrad and Velen, there is another zone where the story eventually leads up to the new area called the Isle's of Skellige and is set completely anew from the previous locations. In the game, the player would have to travel to this new location via boat or fast travel since Skellige is situated on the other side of the map. Hypothetically, since he/she would have to travel across oceans in order to reach the new area, one would expect an even bigger change in the setting, atmosphere and the scene of the characters.

Drifting away from the Slavic roots and European stylings shown in Velen and Novigrad, The Isle's of Skellige bare resemblance to Old Scottish, Celtic and Scandinavian locations, with terrains filled with large mountains and rocky islands, all inhabited by warrior clans.

The music has a different role in this region and had to sound like a completely diverse area from the rest of the game due to differences in locality. In broader sense, the score has been kept very minimal here and mostly consists of ambient-based music concerning the exploring modes.

The Instrumentations are kept relatively small - mainly lute, vocals, solo viola and synthesiser pads - one example is 'Kaer Trolde' which is another exploration cue that comes in to play when roaming around the main castle in Skellige. This is quite an unusual track in the game, on account its the first time we hear synthesisers evidently in the music. As the piece fades in, the only thing you would hear is a chordal harmony played on a synthetic soundscape or pad. The progression is as follows:

Dm C Dm F Am Dm C Bb C

The simplicity of having just a synth pad for an exploration sequence changes the entire outlook on the environment, previously we have heard various instrumentation and arrangements that by comparison, sound much more complex than 'Kaer Trolde'.What did the composers try and achieve through this? Stating my presumption, the landscapes of Skellige are massive in scale and has several characteristics that make it unique to its region, for instance - the land is even more complex in terms wildlife, flora, weather and sea's surrounding the area. All of these attributes occur simultaneously around the player which brings my next point to subject - the sound design. Each sound plays a significant role here in terms of adding a new dimension and bringing the land to life since there is rarely any diegetic music within this region unlike Velen and Novigrad - where characters are able to support the soundscape of the zone. In Skellige, the sound design takes an even larger role in order to immerse the player into an idea formed around Celtic, Scottish and Norse references. (Refer to 'Kaer Morhen + Ambience_Exploration' Video)

Now one may argue that the use of a synthesiser in this region wouldn't reinforce the idea of a historical Celtic repertoire. However in contribution to the soundscapes of Skellige, the Synthetic pad is utilised in a way to blend with the natural sounds (wind, sea, storms) to give a sense that the music is a part of the geography of Skellige. (Cook, 2016)

As the character strays away from Kaer Trolde (The Castle) and ventures out into the vast fields and landscapes, another cue would begin to play which sounds remarkably similar to the previous piece. This second cue is called 'The Fields of Aard Skellig' and is one of the most eminent tracks on the score mainly due to its vibrant structure featuring lute, solo vocals and viola.

The cue begins in a similar fashion to 'Kear Trolde' with a synth entering with a chordal harmony shortly followed by the viola stating the melody. The overall feel of the piece is quite tranquil with a moderate tempo of 90 beats per minute. The primary feature of this cue are the vocals and lyrics. The lyrics are based on an old Scottish Gaelic song written in the late 18th Century called 'Fhir a' bháta'. The lyrics are as follows: Gaelic and their corresponding translation. (Orłowski, 2015)

Fhir a' bháta	*Oh my boatman*
'Stric mi sealltainn on chnoc as àirde	*I often look from the highest hill*
gach àit' an téid thu	*Where you go*
Dh'fheuch am faic mi fear a' bhàta	*That I might see, oh boatman*
gach àit' an téid thu	*Where you go*
Fhir a' bháta	*Oh my boatman*
'Stric mi sealltainn on chnoc as àirde	*I often look from the highest hill*

Similarly to Whispers of Oxenfurt in the previous zone, the lyrics have no particular involving the game, however it is meant to establish a certain time and place for the character. The lyrics also act as a foreign barrier that many may not be aware of, this can also create a separation or an escape from modernity. The piece is relatively slow in tempo and incorporates a call and response pattern between the lute and viola until the vocals fade in taking role of the lead melody.

This creates an enormous contrast from Novigrad and Oxenfurt where the music is very active and artistic in comparison, perfectly demonstrating a dramatic shift in mood and time.

As the player travels further into the Skellige Quest line, diverse themes and ornaments would be introduced based upon interaction with various characters, one example would be the Frost Giant's motif. 'In the Giant's Shadow' is an exclusive cue particularly tailored to events of exploration and interactivity around the giant's lair. The overall feeling of the piece is quite eerie and also ambient based, as it begins with a low pad accompanied with low brass creating a drone-ish kind of texture. Over this layer fades in a bagpipe bringing in the motif as the player draws in closer to the cave.

The sound and texture of the bagpipes merged together with the drones and brass swells create an evocative arrangement and to some degree, form a blurry ambience with the natural soundscapes of the cave. The phrasing of the melody is also very delicate and has a soothing, yet ominous kind of sound on top of the mix, while it transitions into an underscore through a cutscene filled with dialogue. Through this, we can hear that it devises a build in tension due to its unusual timbre in the mix while at the same time, avoiding conflict with the dialogue. (Refer to 'In The Giant's Shadow_Cave Cue' Video).

Implementation and Diegetic Score

The Implementation of the music in The Witcher 3 has been a total game changer while compared to its predecessors. Przybyłowicz has stated that the main goal of implementation is to create an adaptive music system that would make the music feel linear even though it's all done in a non-linear environment. For instance, the music would have to flow in a proper manner as how it's done in Film music, where cue's segue into each other while supporting what's happening on the screen. However in a video game, the player has full control of the parameters, for instance - they could enter combat mode or a cutscene at any given point where the music would have to adapt to all of these situations that can happen randomly, thus justifying the non-linear aspect.

In order to achieve this, the composers had to branch from FMOD to Wwise for The Witcher 3. FMOD and Wwise are both interactive tools that are used to implement audio within a game, such as sound effects, ambiences, dialogue and music. FMOD has been used to implement the audio in the previous games but is not quite advanced as Wwise - which offers far more capabilities. . (Przybylowicz, Wwise Tour 2016 - CD Projekt Red Witcher - Music: General Approach, 2016)

States and Switches

There are two design methods used for the implementation, one of them is established by the use of states and game modes for music control while the other method is focused on actual switches that involves custom made cue's for which the player has no control of.

As for the states and modes, the player has complete control over the music as they interact with certain parameters in the game. For example, the player can decide to transition from exploration

into combat at any time of their choosing, which would also work in parallel with the score changing from an exploration cue to a combat cue. As stated earlier, to maintain the consistency of the music while the player has full control, a transition segment acts as a bridge connecting both of the cue's so there wouldn't be an abrupt change that can easily be noticed. States are only used for music based on their zones, generic combat cues and even specialised pieces of music for Gwent - a mini card game in The Witcher.

To contrary, a players choice doesn't have much influence on music that has been implemented through switches. Common examples of switch-based music include custom dialogue cues, boss battles and specific gameplay moments.

When it comes to implementing music and transitioning cue's from one to the next, there are a few limitations to keep in mind, the fundamental point of these changes revolve around making the transitions seamless and to not be able to notice a sudden change. Few of the most common aspects to be acknowledged in this regard are phrase, tempo, meter and key signature.

 In the case of The Witcher, most of the cues in the game were written and composed in D minor which is quite convenient when it comes to the layering and transitions. This is based on two main facts as stated by the composers, the concept of the score is based on presenting Slavic culture in a modern form, and all instruments used were actually tuned to D natural so the idea was to maintain the integrity of the genre and instruments as much as possible as to how it was done in history.

 The other factor of course would have been to discuss the issue in the pre-production stage before starting to compose any music. Przybyłowicz stated "you can write the most amazing piece of music but the moment it's poorly implemented, it will sound terrible." (Przybylowicz, Wwise Tour 2016 - CD Projekt Red Witcher - Music: General Approach, 2016)

The implementation stage is vital to be planned in the beginning, so the composer would know how the music should react and put together in order to make the implementation seamless as possible. There are only three of the other factors the composers have to worry about.

Layering

The world of The Witcher 3 is humongous in scale and theoretically would require a significant amount of music to be written in order to support the narrative. Be that as it may, in an ideal situation layering techniques are often used in video games to account for interactivity and prevent repetitiveness in the music. In this case, the layering is based on instrumentation, meaning a solo instrument or section would be classified as an individual layer and is often based on parameters linked to certain actions that each player may perform. the layering is mostly controlled by the level of intensity in the scenario as per example:
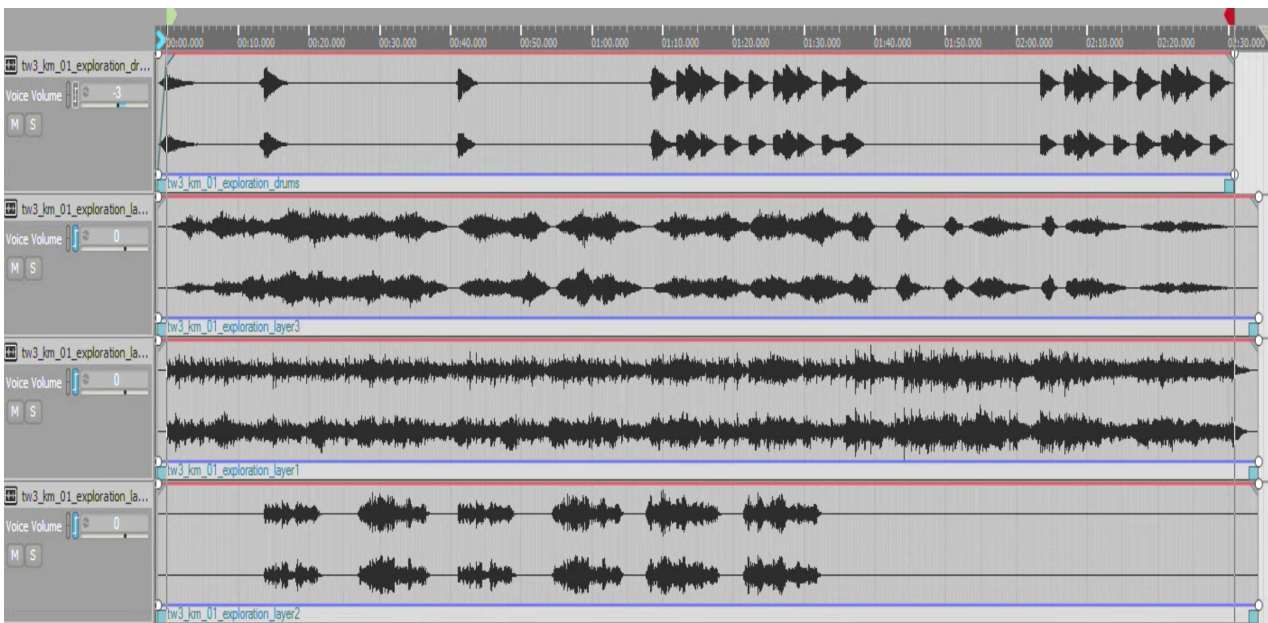
While referring to the image above, there are four separate waveforms which act as their own individual layer. This is an example taken from one of the cues 'Kaer Morhen' and serves as an exploration sequence while roaming around The Witcher training grounds. As mentioned earlier, each layer would fade in based on parameters such as intensity so in this particular case, a lute and percussion are present in the first layer, flute with the melody in the second layer, a string section in the third and finally just the strings alone in the fourth.

Another benefit of having a system such as this is that the final result would consists of four different arrangements of the exact same cue, without having to compose multiple pieces of music precisely for the same purpose. In addition, having the same instruments play the same melody over and over again can eventually become tiresome to listen to while exploring for a great amount of time, this is where the intensity parameter comes to use, in triggering which layer to play and when to fade it in. In most cases, each layer would often be synchronised to fade in at an interval of either bars or the beats so transitions can take place in a musical manner which is suited towards meter and grid.

In non-generic sequences, the level of intensity can be based on numerous factors in the game. As an example, the second layer of the flute can be based on distance - meaning the melody would become to fade in as the player moves in close proximity to the Witcher stronghold. Another case in point may be when all the layers are simultaneously playing together in regions where there primarily isn't any dialogue or intense soundscapes and effects.

All generic (zone) exploration and combat sequences are completely based on layering, more over music that has been implemented with switches utilise the layering technique as well at certain points such as interactive dialogue scenes. This type of scene takes place when the player interacts

with another character and has various options of dialogue to choose from in order to form a conversation. The layering is linked to certain parameters in the conversation that may seem appropriate for a new layer to fade in, such as the beginning of a dialogue cutscene may start out in a casual manner with an ambient piece of music as the first layer, at any moment the conversation can escalate into an intense or danger situation, thus brings in a heavier layer of music within the same key and meter.

At any given points in the game, a player may be in exploration mode and suddenly enters a combat situation which could last for roughly thirty seconds and then fade back to the exploring sequence. A method of making these transitions interesting is by dividing the cue into smaller segments that can virtually start at any point. The image below illustrates an example of how the cue can be separated:
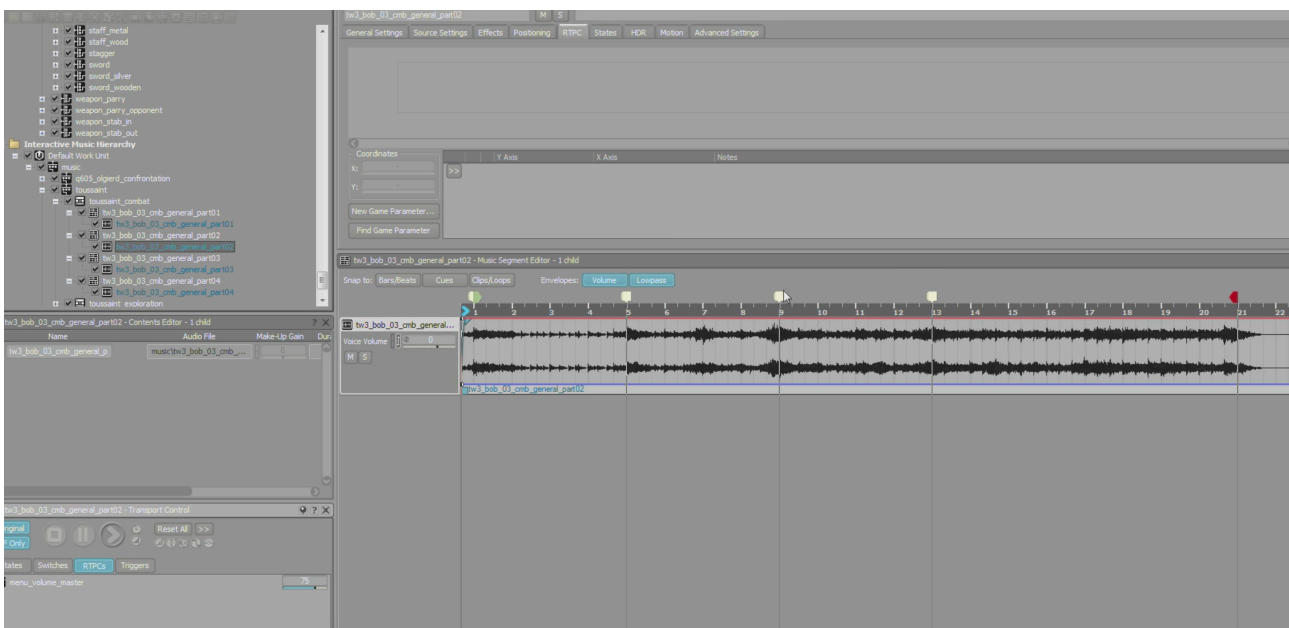
As shown in the image, are these white markers positioned at various points in the cue, those markers would act as a starting point once the next cue is beginning to fade back in to the

exploration. This method allows for non-repetitive transitions to keep the player captivated in the events taking place, without them being distracted.

Diegetic Score

As the player explores various areas in the game, they would often come across situations where source music would absolutely dominate the score. These sort of events take place in more of the lively areas such as Novigrad and Oxenfurt which bear a remarkable resemblance to that of the renaissance period. With that being said, these two areas have an artistic approach to the sound and visuals of the city, granted that one would frequently stumble upon small dance bands, crowd entertainment, and tavern performances.

In a game such as this, there can be a number of consequences by using source music within a region that is already occupied with an underscore, sometimes it can be a question of instrumentation, harmonic content or even density - all dependant on whether or not the transition between score and source music can occur in a faultless manner, or if the score can still remain beneath the diegetic parts to form a whole new arrangement together.

In the events of the game, the score and source music are kept relatively independent of one another to form a new perspective by the use of crossfading and by having a slight similarity between the cues. In the following example (Refer to 'Novigrad_Score and Source Music Transition' Video) we can hear a transition from an exploration sequence to a source cue whereby one can immediately pick out a change of scope in the music as it narrows down in on the town square. Momentarily, this draws the player in to specific degree of immersion. Instrumentation between the cues also

correspond with each other to avoid a clash in the alteration, with a plucked movement accompanied with flute fading into guitar strumming and flute melody. Regarding implementation, the diegetic cue would be attached to the characters that are performing on screen. To my assumption, there would be some sort of a proximity sensor around the audio object which are the performers in this case, as the player crosses a certain field the crossfade would begin to fade each cue in and out and vice versa.

Conclusion

To sum up the analysis, we can clearly see the level of interactivity and immersion the music is capable of as it grasps the player in to the many different worlds of The Witcher while sticking to its roots. The idea of mixing traditional Slavic Folklore with a big contemporary sound that we are normally accustomed to, has taken the game in a whole new dimension with regard to the level of immersion and interactivity.

The collaboration between Przybyłowicz, Stroinski and Percival certainly provided the score with a large degree of authenticity, regarding their choice of arrangement and having solo instruments and vocals as the fundamental part of the music. By the use of song scoring, the musical arrangements and vocals really take the score to its prime and foreground when it needs to tell the story by placing you in a certain time and place. Moreover, the foundation of the music has been established through improvisational techniques of re-enactment, which also caused some issues regarding tuning, personally I find that all the imperfections of the music creates the perfect atmosphere that plays in so well by having direct influence on the game itself.

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